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09/326,308	06/07/1999	YI-HWA CHU	60.130-464	4030

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CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

EXAMINER

STRIMBU, GREGORY J

ART UNIT	PAPER NUMBER
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3634

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 34

Application Number: 09/326,308
Filing Date: June 07, 1999
Appellant(s): CHU, YI-HWA

MAILED

JUN 04 2003

GROUP 3600

David J. Gaskey
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 12, 2003.

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(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct in so far as none of the after final amendments have been entered. However, it should be noted that the examiner has attempted to contact Mr. Gaskey at least one time before February 7, 2002 and several times before May 22, 2003 in an attempt to place the case into a condition for allowance. When the examiner finally reached Mr. Gaskey, the examiner proposed making essentially the same changes the applicant had proposed in the after final amendments, but for the inclusion of claims 44-47 which were presented for the first time after final. Mr. Gaskey, as noted in the interview summary, paper no. 33, declined to accept the examiner's offer.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

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(7) Grouping of Claims

Appellant's brief includes a statement that claims 25 and 36-37 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

4,421,299	Hess	12-1983
6,253,491	Pages	7-2001
4,191,060	Sessa	3-1980

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 20-25, 36-38 and 41-43 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4-6, 8 and 13 of U.S. Patent No. 6,253,491 in view of Sessa '060. This rejection is set forth in prior Office Action, Paper No. 18.

It should first be noted that a reversal of the order in which the references are used is not a new grounds of rejection because the same teachings of the references are used in finding the claimed subject matter to be obvious. *In re Albrecht*, 579 F.2d 92, 198 USPQ 208 (CCPA 1978); *In re Cook*, 372 F.2d 563, 152 USPQ 615 (CCPA 1967); *In re Bush*, 296 F.2d 491, 131 USPQ 263 (CCPA 1961).

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Claims 20-25, 36-38 and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pages in view of Sessa '060. Pages discloses a vehicle window raiser assembly, comprising a cable 3, a winding drum 1 having a body portion (not numbered, but seen in figure 4) that has a plurality of grooves 2 that support a portion of the cable for winding the cable, the drum including a flange (not numbered, but seen at the bottom portion of the drum in figure 4) at one end of the body portion, the flange having an opening 21, a hood 12 having a sidewall (not numbered, but seen in figure 4) extending along a portion of the length of the drum body at a first radial dimension and a passage portion (not numbered, but seen in figure 4) having a second, larger radial dimension, the passage portion and the drum flange cooperating to form a tunnel 16 that guides and supports an end 19 of the cable prior to the end being inserted into the opening 21 in the flange. Pages is silent concerning a radially extending flange.

However, Sessa '060 discloses a vehicle window raiser assembly, comprising a cable 11, a winding drum 10 having a body portion (not numbered, but seen in figure 1) that has a plurality of grooves (not numbered, but seen in figure 1) that support a portion of the cable for winding the cable, the drum having a radially extending flange 13 at one end of the body portion, the flange including an opening 12 best shown in figure 7 as having a ramp positioned at approximately 45 degrees relative to the axis of the drum. Projections 30 extend from the drum flange 13 in an axial direction and a brake box 36 having projections 26 that cooperate with the flange projections such that rotation of the brake box projections causes rotation of the drum. As seen in figure 7, the opening the flange extends into one of the drum flange projections.

It would have been obvious to one of ordinary skill in the art to provide Pages with a radially extending flange having an opening 12, as disclosed by Sessa '060, to improve the rotational stability of the drum as it rotates and to provide a more secure connection of the end of the cable with the flange.

(11) Response to Argument

1) The rejection of claims 20-25, 36-38 and 41-43 under 35 U.S.C. 103(a) is proper.

2) The rejection of claims 20-25, 36-38 and 41-43 under the judicially created doctrine of obviousness-type double patenting is proper.

1.

It should first be noted that the rationale to modify or combine the prior art does not have be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

With respect to the combination of the teachings of Sessa '060 and Pages, the motivation to combine their teachings is clear and persuasive to one with ordinary skill in the art. The Pages reference discloses a flange (not numbered, but shown at the bottom portion of the drum 1 in figure 4) having a diameter which substantially matches

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the diameter of the remainder of the drum. It is a well known principle of physics that the moment of inertia of a radial object, such as the drum, increases as the diameter of the radial object increases. It is also well known that a radial object having greater moment of inertia has greater stability about an axis of rotation perpendicular to the radial dimension when the radial object is rotating about said axis. Therefore, increasing the radial dimension of the flange of Pages, as taught by Sessa '060, would increase the moment of inertia of the drum and therefore the dynamic stability of the drum as it rotates about its longitudinal axis without increasing the size of the drum throughout its entire length. With such greater stability, the drum 1 would be able to maintain greater stability with respect to its mounting base 11, reduce the wear on the bearings supporting the drum, and increase the accuracy of the tension in the cables 3 and 4. Additionally, modifying the flange of Pages, as taught by Sessa '060, would not destroy the teachings of Pages, since one with ordinary skill in the art maintain spatial relationship between the flange and the hood so that the proper sized tunnel 16 were maintained. Moreover, lines 23-24 of page 1 of the applicant's disclosure state that increasing the diameter of a cable drum increases its performance.

Also, the method of connecting the end of the cable 4 to the drum 1, as taught by Pages, is not secure since the pellet 19 of the cable 4 is susceptible to separating from the drum 1 unexpectedly. The pellet 19 of the cable 4 is connected to the drum 1 by first inserting the pellet 19 through the hooking opening 21 and then moving the pellet 19 circumferentially into a retaining cavity at one end of the cavity behind the hooking opening 21. See figures 7 and 9. If the cable 4 were to become slack, the pellet 19

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could move circumferentially away from the retaining cavity toward the hooking opening, at which position, the pellet could easily separate from the drum. Once separated from the drum, it would be virtually impossible for the pellet 19 to be reinserted into the drum without human intervention. Sessa '060, on the other hand, discloses a more secure method of connecting a cable 11 to a flange 13. As shown in figures 2 and 7, Sessa '060 discloses attaching the end of the cable to the flange by inserting a pellet (not numbered) into the opening 12 in the flange. With this improved connection, if the cable 13 were to become slack and the pellet were to separate from the opening 12, the pellet of the cable 13 would be automatically reinserted into the opening 12 once the cable were to become taught again. Therefore, one with ordinary skill in the art would readily appreciate the improved connection means taught by Sessa '060 and be motivated to provide Pages with the same to provide a better means of connecting the cable with the flange.

With respect to claim 20, the opening 12 of Sessa '060 extends both radially and axially since it is angled at approximately 45 degrees with respect to the rotational axis of the drum 10.

With respect to claims 22-24, the opening 12 of Sessa '060 clearly discloses a ramp and since it is angled at approximately 45 degrees with respect to the rotational axis of the drum 10, it aids in the insertion of the end of the cable into the flange 13.

With respect to claim 25, Sessa '060 discloses projections 30 extending from the drum flange 13 in an axial direction which cooperate with brake box projections mounted on element 26 as shown in figure 3.

2.

As noted above, the rationale to modify or combine the prior art does not have be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

With respect to the combination of the teachings of Sessa '060 with claims 4-6, 8 and 13 of Pages, the motivation to provide the claims of Pages with the teachings of Sessa '060 is clear and persuasive to one with ordinary skill in the art. Claims 4-6, 8 and 13 of Pages recite the applicant's claimed invention but for a radially extending flange. It is a well known principle of physics that the moment of inertia of a radial object, such as the drum, increases as the diameter of the radial object increases. It is also well known that a radial object having greater moment of inertia has greater stability about an axis of rotation perpendicular to the radial dimension when the radial object is rotating about said axis. Therefore, increasing the radial dimension of a portion of the drum of Pages, as taught by Sessa '060, would increase the moment of inertia of the drum and therefore the dynamic stability of the drum as it rotates about its longitudinal axis without increasing the size of the drum throughout its entire length. With such greater stability, the drum 1 would be able to maintain greater stability with respect to its mounting base 11, reduce the wear on the bearings supporting the drum,

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and increase the accuracy of the tension in the cables 3 and 4. Moreover, lines 23-24 of page 1 of the applicant's disclosure state that increasing the diameter of a cable drum increases its performance. Additionally, modifying Pages, as taught by Sessa '060, would not destroy the teachings of Pages, since one with ordinary skill in the art maintain spatial relationship between the flange and the hood so that the proper sized tunnel 16 were maintained. Therefore, one could easily maneuver the pellet 19 into the opening 21. Finally, the applicant comments concerning Sessa '060 being directed to a pre-wound cable are unfounded supposition. Since Sessa '060 has no hood, it is impossible to determine if the cable is pre-wound or not.

With respect to claim 20, the opening 12 of Sessa '060 extends both radially and axially since it is angled at approximately 45 degrees with respect to the rotational axis of the drum 10.

With respect to claims 22-24, the opening 12 of Sessa '060 clearly discloses a ramp and since it is angled at approximately 45 degrees with respect to the rotational axis of the drum 10, it aids in the insertion of the end of the cable into the flange 13.

With respect to claim 25, Sessa '060 discloses projections 30 extending from the drum flange 13 in an axial direction which cooperate with brake box projections mounted on element 26 as shown in figure 3.

Finally, it should be pointed out that claims 20 and 36 recite the same invention as disclosed by Pages, but for a radially extending flange. Claims 20 and 36 do not recite the apparent novel feature of the invention, as stated by the disclosure, of

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reducing the height of the drum (see lines 17-18 of page 2 and compare figures 5A and 5B) by providing a flange for guiding the end of the cable along its upper surface and an inclined ramp.

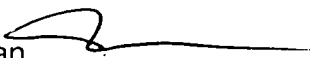

For the above reasons, the rejections set forth in the final Office action, paper no. 18, should be sustained.

Respectfully submitted,



Gregory J. Strimbu
Primary Examiner
Art Unit 3634
August 5, 2004

Conferees
Jerry E. Redman
Daniel P. Stodola

CARLSON, GASKEY & OLDS, P.C
400 WEST MAPLE
SUITE 350
BIRMINGHAM, MI 48009